STATE OF DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL- SITE INVESTIGATION AND RESTORATION BRANCH

FINAL PLAN OF REMEDIAL ACTION

Former Gildea Nursery Site
Newark, DE — DNREC Project No. DE-1251

This final plan of remedial action (final plan) presents the Department of Natural Resources and Environmental Control's (DNREC's) preferred cleanup alternative for the remediation at the Former Gildea Nursery (site) in Newark. For site-related reports and more information, please see the public participation section of this document.

The purpose of the final plan is to provide specific information about the soil contamination and the cleanup alternatives DNREC has considered. In addition, as described in Section 12 of the Delaware Regulations Governing Hazardous Substance Cleanup (Regulations), DNREC provided notice to the public and an opportunity for the public to comment on the proposed plan. The comment period began on July 11, 2004 and ended on August 2, 2004. At the comment period's conclusion, DNREC received one public comment. DNREC reviewed and considered the comment received, however, the comment did not result in any change to the remedial action proposed for the site. DNREC is now issuing the final plan. The final plan shall designate the selected remedy, if required, for the site. All investigations of the site, the final plan, comments received from the public, DNREC's responses to the comments, and the final plan will constitute the Remedial Decision Record.

This final plan summarizes the 2004 Facility Evaluation (FE) Report of the Former Gildea Nursery site and the administrative record file upon which this final plan is based. DNREC determined that the 2004 FE report satisfied the requirements of a Remedial Investigation (RI) Report and therefore, adopted the 2004 FE report as a RI report. Additional environmental investigations that were conducted at the site were used for screening purposes only. These investigations included a 1999 Phase I Environmental Site Assessment Report, a 1999 Limited Asbestos and Lead Survey Report and a 1999 Phase II Environmental Site Assessment. Copies of these documents can be obtained or viewed at locations listed at the end of this document.

INTRODUCTION

The Former Gildea Nursery site is located at 2825 Ogletown Road near Newark, New Castle County, Delaware (Figure 1). The site is approximately seven (7) acres in size and is bounded by Old Ogletown Road and Chestnut Hill Estates to the southeast, Penn Central Railroad stream to the north, Cool Run Park to the southwest and Newark Oaks subdivision to the west. The site is labeled as tax parcel number 09-022.00-015 on the tax maps of New Castle County, Delaware. The current owner of the property, Gildea and Gildea, entered into a Voluntary Cleanup Program (VCP) agreement with DNREC in order to conduct an evaluation of site soil, stream sediment, a debris pile and groundwater in an attempt to identify areas of environmental concern, if any.

SITE DESCRIPTION AND HISTORY

The approximately seven (7) acre property has several structures on-site including two (2) one-story buildings, a two-story building, a greenhouse and a large metal covered building with a masonry addition. According to tax parcel records and aerial photographs, these buildings were completed in 1985 and appear to be the first buildings on site.

The site history has been determined based on the review of historical aerial photography and previous documents produced for the area. A grist mill, saw mill and pond were located on and adjacent to the site between the mid 1700s to the mid 1800s. Excavation activities were performed at the site in 1951 and again in 1971 for the installation of a 30-inch and 21-inch sanitary sewer pipe, respectively. The on-site stream, Cool Run, was diverted to the north to facilitate the placement of the two (2) sanitary sewer pipes. The soil in the existing debris pile is believed to be from either the excavation of the sewer pipes and/or from the excavation during the construction of the Newark Oaks subdivision.

Five businesses operate on the site and they include Delaware Express Shuttle, Mulch Mountain, Shamrock Tree Service, R.J. Boyd Electrical and Gildea Nursery.

INVESTIGATION RESULTS

Based on a review of the analytical data collected during the 2003 Facility Evaluation and summarized in the 2004 RI report, approximately thirty (30) samples were collected across the site (Figure 2). The following tables describe the soil, groundwater and sediment samples that exceeded their respective DNREC Uniform Risk-Based Standard (URS) values for an unrestricted use (residential) property. These URS values are guidance values above which DNREC evaluates cleanup of the contamination for the given use of the site. The following tables, also provides a summary of the contaminant concentrations as well as the respective unrestricted use URS value:

SOIL

GP-3A	Iron	**15,100**	2,300
GP-6A	Aluminum	**12,300**	7,800
	Iron	**19,600**	2,300

[1]= Uniform Risk-Based Remediation Standard Unrestricted Use Value for Protection of Human Health.

GROUNDWATER

GP-1	Iron	**551**	300[A]
	Manganese	**423**	50[A]
GP-5	Iron	**1,500**	300
	Manganese	**1,590**	50
GP-10	Aluminum	**923 RS**	200[A]
	Iron	**2,430**	300
	Lead	**27.5 RS**	15
	Manganese	**247**	50
	Vanadium	**80.3 RS**	26
GP-13*	Iron	**14,300**	300
	Manganese	**888**	50

[1]= Uniform Risk-Based Remediation Standard Value for Protection of Human Health.
*= This groundwater sample location was a pre-packed Geoprobe well installed to further evaluate the apparent elevated concentrations of aluminum, lead and vanadium in the groundwater sample collected from GP-10.
RS= Resampled as GP-13 due to the presence of inorganics suspected to be the result of suspended sediments.
[A]= URS values for iron, manganese and aluminum represent Secondary Maximum Contaminant Levels (SMCLs) which are based on the aesthetic qualities of the water such as taste, odor, and color and do not relate to a human health risk.

SEDIMENT

THERE WERE NO SEDIMENT SAMPLE EXCEEDANCES			

SOIL

The contaminants of concern in soil at the Former Gildea Nursery site include iron and aluminum. These concentrations exceed the URS values for an unrestricted land use setting. Based on a residential soil ingestion non-carcinogenic risk scenario, the calculated residential Hazard Index (HI) was 1 (unitless). Therefore, these soils are within acceptable limits for use in a residential land use setting.

There were no volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), pesticides, or polychlorinated biphenyls (PCBs) detected in any of the soil samples above their URS.

GROUNDWATER

Groundwater at the site contains contaminants of concern which include iron and manganese that exceed groundwater URS values. These groundwater URS values are Secondary Maximum Contaminant Levels (SMCLs), which are based on the aesthetic qualities of the groundwater such as taste, odor and color. None of the contaminants of concern that were identified above their URS values (iron and manganese) present a human health risk.

There were no VOCs, SVOCs, pesticides, or PCBs detected in any of the groundwater samples above their URS.

SEDIMENT

There were no VOCs, SVOCs, inorganics, pesticides, or PCBs detected in any of the sediment samples above their URS values.

REMEDIAL ACTION OBJECTIVES

QUALITATIVE OBJECTIVES

Qualitative objectives describe in general terms what the final results of the remedial action, if necessary, should be. Due to the lack of an unacceptable risk associated with the contaminants identified at the site, the qualitative objectives have been met with regards to the use of groundwater at the site, as well as the use of the site in an unrestricted (residential) setting.

QUANTITATIVE OBJECTIVES

Quantitative objectives define specific levels of remedial action to achieve protection of human health and the environment. Based on the qualitative objective, the quantitative objective is that no further action is needed to meet the qualitative objectives at the site.

FINAL PLAN OF REMEDIAL ACTION

Based on DNREC's evaluation of the site information, which includes current and past environmental investigations, historical information and the above remedial action objectives, the following remedy, as described below, should be implemented at the site:

- No further action is recommended.

DECLARATION

This final plan of remedial action for the Former Gildea Nursery site is protective of human health, welfare and the environment, and is consistent with the requirements of the Delaware Hazardous Substance Cleanup Act.

For

John Blevins
Director, Division of Air and Waste

8/6/04
Date of Review

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